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		Application Number	10/109,756		
		Filing Date	March 29, 2002		
		First Named Inventor	Paul Vincent Fish		
		Group Art Unit	1626		
		Examiner Name	Golam M. Shameem		
		Attorney Docket Number	PC10939A		
Sheet	2	of	5		

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		DANKWARDT, et al, "Solid-Phase Synthesis of Di- and Tripeptidic Hydroxamic Acids as Inhibitors of Procollagen C-proteinase", Bioorganic & Medicinal Chemistry Letters 10 (2000); pp 2513-2516	
		FRAY, et al, "Selectivity of Inhibition of Matrix Metalloproteases MMP-3 and MMP-2 by Succinyl Hydroxamates and their Carboxylic Acid Analogues is Dependent on P3' Group Chirality", Bioorganic & Medicinal Chemistry Letters 11 (2001); pp 567-570	
		FESSLER, et al, "Biosynthesis of Procollagen", Ann Rev. Biochem. 1978, Vol. 47; pp 129-162	
		GOLDBERG, et al, "Procollagen Peptidase: Its Mode of Action on the Native Substrate", Cell., 1975, Vol. 4; pp 45-50	
		KESSLER, et al, "A Method for Assaying the Activity of the Endopeptidase Which Excises the Nonhelical Carboxyterminal Extensions from Type I Procollagen", Analytical Biochemistry, 1978, Vol. 86, pp 461-169	
		DUKSIN, et al, "The Role of Glycosylation in the Enzymatic Conversion of Procollagen to Collagen: Studies Using Tunicamycin and Concanavalin A", Archives of Biochemistry and Biophysics, 1978, Vol. 185, No. 2; pp 326-332	
		LEUNG, et al, "Separate Amino and Carboxyl Procollagen Peptidases in Chick Embryo Tendon*", The Journal of Biological Chemistry, 1979, Vol. 254, No. 1, pp 224-232	
		DAVIDSON, et al, "Procollagen Processing", Eur. J. Biochem., Vol. 100, 1979, pp 551-558	
		NJIEHA, et al, "Partial Purification of a Procollagen C-Proteinase. Inhibition by Synthetic Peptides and Sequential Cleavage of Type I Procollagen", Biochemistry, 1982, Vol. 21, pp 757-764	
		HOJIMA, et al, "Type I Procollagen Carboxyl-terminal Proteinase from Chick Embryo Tendons", The Journal of Biological Chemistry, 1985, Vol. 260, No. 29, pp 15996-16003	
		KESSLER, et al, "Type I procollagen C-proteinase from mouse fibroblasts", Eur. J. Biochem., 1989, Vol. 180, pp 115-121	

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		KESSLER, et al, "Partial Purification and Characterization of a Procollagen C-Proteinase from the Culture Medium of Mouse Fibroblasts", Collagen Rel. Res., 1986, Vol. 6; pp 249-266	
		FERTALA, et al, "Self-assembly into Fibrils of Collagen II by Enzymic Cleavage of Recombinant Procollagen II", The Journal of Biological Chemistry, 1994, Vol. 269, No. 15; pp 11584-11589	
		RYHANEN, et al, "Conversion of Type II Procollagen to Collagen in Vitro: Removal of the Carboxyl-Terminal Extension Is Inhibited by Several Naturally Occurring Amino Acids, Polyamines, and Structurally Related Compounds", Archives of Biochemistry and Biophysics, 1982, Vol. 215, No. 1, pp	
		PILCHER, et al, "The Activity of Collagenase-1 Is Required for Keratinocyte Migration on a Type I Collagen Matrix", The Journal of Cell Biology, 1997, Vol. 137, No. 6, pp 1445-1457	
		AGREN, M.S., "Gelatinase activity during wound healing", British Journal of Dermatology, 1994, Vol. 131, pp 634-640	
		SALO, et al, "Expression of Matrix Metalloproteinase-2 and -9 during Early Human Wound Healing", Laboratory Investigation, 1994, Vol. 70, No. 2; pp 176-182	
		TARABOLETTI, et al, "Inhibition of Angiogenesis and Murine Hemangioma Growth by Batimastat, a Synthetic Inhibitor of Matrix Metalloproteinases", Journal of the National Cancer Institute, 1995, Vol. 87, No. 4; pp 293-299	
		ZASK, et al, "Inhibition of Matrix Metalloproteinases: Structure Based Design", Current Pharmaceutical Design, 1996, Vol. 2; pp 624-661	
		BECKETT, et al, "Recent advances in matrix metalloproteinase inhibitor research", DDT, 1996, Vol. 1, No.1; pp 16-26	
		PROKOP, et al, "Heritable Diseases of Collagen", The New England Journal of Medicine, Vol 344, No. 6, pp 376-383	
		KUHN, "The Classical Collagens: Types I, II, and III", Structure and Function of Collagen Types, 1987; pp 1-42	

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		EVANS, et al, "A General Method for the Synthesis of Enantiomerically Pure Beta-Substituted, Beta-Amino Acids through alpha-Substituted Succinic Acid Derivatives", J. Org. Chem., 1999, Vol. 64; pp 6411-6417	
		SIMONEAU, et al, "Discovery of Non-peptidic P2-P3 Butanediamide Renin Inhibitors with High Oral Efficacy", Bioorganic & Medicinal Chemistry, 1999, Vol. 7, pp 489-508	
		YAMAMOTO, et al, "Inhibition of Membrane-Type I Matrix Metalloproteinase by Hydroxamate Inhibitors: An Examination of the Subsite Pocket", J. Med. Chem., 1998, Vol. 41; pp 1209-1217	
		STEINMAN, et al, "The Design, Synthesis, and Structure-Activity Relationships of a Series of Macrocyclic MMP Inhibitors", Bioorganic & Medicinal Chemistry Letters 8, 1998, pp 2087-2092	
		VU, et al, "Nonpeptidic SH2 Inhibitors of the Tyrosine Kinase Zap-70", Bioorganic & Medicinal Chemistry Letters 9, 1999, pp 3009-3014	
		FRAY, et al, "Application of Epimerisation-Free Amide Coupling Conditions to the Synthesis of Matrix Metalloprotease Inhibitor Intermediates", Tetrahedron 54, 1998; pp 13825-13832	
		FLOYD, et al, "Rapid Synthesis of Matrix Metalloproteinase Inhibitors via Ugi Four-Component Condensation", Synlett, 1998; pp 637-639	
		McClure, et al, 1998, Vol. 8, No. 2, pp 143	
		Chem. Abs., 1997:594709	
		BORNSTEIN, et al, "The Proteins", Academic Press, New York, 1979, pp 412-632	
		KIVIRIKKO, et al, "Extracellur Matrix Biochemistry", Elsevier Science Publishing Co., Inc., New York, pp 83-118	

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